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Report of the

WORKSHOP ON DATA AND KNOWLEDGE IN DEEP-SEA FISHERIES IN THE HIGH SEAS

Rome, 5–7 November 2007

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Rome, 5–7 November 2007

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2008

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PREPARATION OF THIS DOCUMENT

The expansion of deep-sea fisheries from coastal waters under national jurisdiction towards high seas areas, and their potential impact on fish stocks, biodiversity and habitat, the management of deep-sea fisheries in the high seas has become an issue of international concern.

The FAO Committee on Fisheries (COFI) first discussed deep-sea fisheries at its twenty-fifth session in 2003 and supported the proposal for an international conference on the topic (DEEP SEA 2003, Queenstown, New Zealand). The inability to manage without data, the need for full documentation of fishery activity and national requirements for confidentiality of data, the different requirements for different fisheries – with many of the same problems, and the balance of harvest optimism versus management precaution, are just a few of the lessons learned from past experience in deep-sea fisheries mentioned in the synthesis of issues at DEEP SEA 2003.

FAO also convened an Expert Consultation on Deep-sea Fisheries in the High Seas in November 2006 that addressed management issues. The management of deep-sea fisheries in the high seas has also been a major source of concern at high level international fora, including United Nations General Assembly (UNGA), the Convention on Biological Diversity, the World Conservation Union (IUCN) meetings and others over the past few years.

As recognized at Deep Sea 2003, it is impossible to effectively manage deep-sea fisheries without appropriate data. In addition, lack of knowledge and poor monitoring of the fishing activities associated with deep-sea fisheries in the high seas have been constantly reported. Improvement of collection, exchange and dissemination of information regarding these fisheries is recognized as a required step towards their effective and sustainable management. The conclusions and recommendations of the 2006 FAO Expert Consultation also identified many of the same issues. The most recent UNGA Resolution (61/105) called on, "FAO...to establish a time table of relevant work with respect to the management of the deep sea fisheries in the high seas, including enhancing data collection and dissemination, promoting information exchange and increased knowledge on deep sea fishing activities, such as through convening a meeting of States engaged in such fisheries...". In addition, the resolution commended FAO on its work regarding deep-sea fisheries and invited the Organization to further its work on the topic.

This workshop was organized in answer to the gaps in data and knowledge identified by many of the approved mentioned organizations and conferences, and in direct support to the development of the International Guidelines on Deep-sea Fisheries in the High Seas. Alexis Bensch and Dominique Gréboval organized and convened the workshop with support from and Jean-Jacques Maguire, FAO Consultant, and Jessica Sanders, FAO Consultant. The workshop was organized under the project "Promotion of sustainable fisheries: support for the Plan of Implementation of the World Summit on Sustainable Development".

Distribution:

Participants
FAO Members
Directors of Fisheries
FAO Regional Fishery Offices

FAO.
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ABSTRACT

This document contains the report of the Workshop on Data and Knowledge in Deep-sea Fisheries in the High Seas held in Rome from 5 to 7 November 2007. The Workshop was convened to review an initial draft of the International Guidelines as called for by the FAO Committee on Fisheries at its twenty-seventh session in 2007. This expert consultation was preceded by the Expert Consultation on Deep-sea Fisheries in the High Seas, held in Bangkok, in November 2006. The consultation adopted a draft of the international guidelines to be forwarded on to a technical consultation for review and adoption.

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LIST OF ACRONYMS

As	Arrangements
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
FAO	Food and Agriculture Organization of the United Nations
FIRMS	Fishery Resource Monitoring System
GFCM	General Fisheries Commission for the Mediterranean
IMO	International Maritime Organization
NGO	Non-governmental Organization
RFMO	regional fisheries management organization
SIODFA	Southern Indian Ocean Deepwater Fishers' Association
UNEP	United Nations Environment Programme
VME	vulnerable marine ecosystem
WWR	World Wide Review of Bottom Fisheries in the High Seas

OPENING OF THE MEETING AND ARRANGEMENTS FOR THE SESSION

1. The Workshop on Data and Knowledge in Deep-sea Fisheries in the High Seas was held in the headquarters of the Food and Agriculture Organization of the United Nations (FAO) in Rome, from 5 to 7 November 2007.

2. The workshop was attended by 14 experts from various regional fisheries management organizations (RFMOs) with a mandate for the management of bottom fisheries in the high seas, as well as experts from national fisheries institutes. The list of participants is attached as Appendix B.

3. The meeting was opened by Dominique Gréboval, Senior Fishery Planning Officer, who reminded participants of the context in which this workshop was organized and the main expected outputs.

ELECTION OF THE CHAIRPERSON

4. Johanne Fischer, Executive Secretary, Northwest Atlantic Fisheries Organization (NAFO), was elected Chairperson.

ADOPTION OF THE AGENDA

5. The provisional agenda was presented to the participants. This workshop was conducted over three days and focused on two main points: the World Wide Review of Bottom Fisheries in the High Seas (WWR) and the guidelines. The adopted agenda is attached as Appendix A.

OBJECTIVES OF THE WORKSHOP

6. Alexis Bensch, the convening officer, reviewed the objectives of the meeting and gave the background to the development of the workshop. The workshop was designed to review and offer advice on improvements on the first draft of the World Wide Review of Bottom Fisheries in the High Seas. The review seeks to:

a) capture a current picture of bottom fisheries on the high seas;
b) develop an inventory of these fisheries based on fishing grounds, gear, and target species or species assemblages;
c) quantify their importance in terms of fishing vessels and activity; and
d) assess the geographical distribution of these fisheries.

7. The second objective of the workshop was to comment and propose amendments for sections relevant to data in the draft International Guidelines on Management of Deep-sea Fisheries in the High Seas developed at the 2007 Expert Consultation on International Guidelines for Deep-sea Fisheries in the High Seas (Bangkok, Thailand) (FAO Fisheries Report. No. 838. Rome, FAO. 2007. 203p).

25. The workshop also underlined the fact that it was difficult to get vessels to report accurate data on discards, making scientific observers particularly important for collecting this type of data.

26. Workshop participants discussed the issues of collecting information on potential VMEs where gear is in use that could impact a VME, but the impact is not obvious (e.g. longlines do not necessary pull up large pieces of coral but might have negative impacts on vulnerable habitats).

Stock assessment

27. Workshop participants noted that usually the scientific bodies of RFMOs are responsible for the assessment of the stocks managed by a RFMO. In areas where no RFMO exists, FAO should periodically organize a group of experts to assess these stocks. Management measures for these fisheries should be determined by the outcome of the advice from the expert groups.

28. In the case of straddling stocks, flag states should collaborate with RFMOs/As, and where there is no RFMO, with FAO, by providing information and data required for the assessment of these stocks.

Data validation

29. Concerning data validation, it was considered important that multiple different sources (VMS, catch declarations, etc.) are used for cross-checking data.

Data reporting

30. The workshop discussed the flow of data and information between main stakeholders: fishers, scientists and fishery managers. A data reporting schema was elaborated (see Figure 1). In regions with no RFMO, the role of FAO was outlined, requiring FAO to collect data and lead the creation of an expert group responsible for the assessment of the fisheries and formulation of recommendations to flag States.

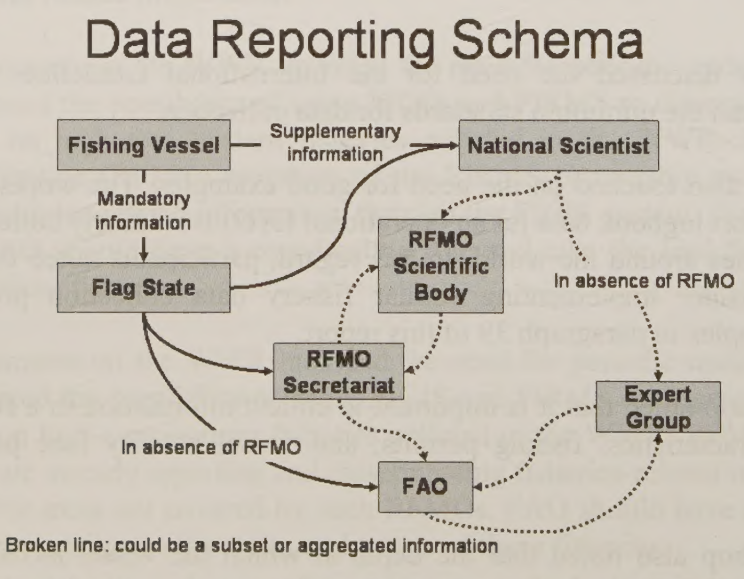

Figure 1 – Information flow regarding data on bottom fisheries in the high seas.

31. The workshop recommended that FAO lead the establishment of a partnership with relevant organizations and institutions to develop a database on VMEs. A partnership was considered particularly important due to the extensive work that has and is being done by groups around the world (i.e. Census of Marine Life, the World Conservation Union, Hermes, etc.), and owing to the large cost of such a project.

Historical information

32. Participants also noted that historical information is often not held by flag States for high seas fisheries. Often captains of fishing vessels in deep-sea fisheries maintain detailed tow-by-tow, or haul-by-haul information, including detailed position, depth and catch. Accessing these resources in addition to information obtained from fisheries institutes, industry, and universities is important in order to capture this information.

Confidentiality

33. There was an extensive discussion on data confidentiality, the issues that bring about the need for data confidentiality and rules that might apply. Data confidentiality should never prevent the necessary assessments from taking place, although an appropriate set of rules defining conditions of access to the data should always exist.

34. Bottom fisheries on the high seas are highly competitive, and data confidentiality is a major issue for those supplying information on their fishing activities. In those fisheries where only "input controls" are used, a "race for fish" typically ensues and decreases the incentive for vessel masters to report detailed information. Rights-based management regimes were discussed as a potential tool to encourage better reporting.

35. The workshop recognized that the level of confidentiality needed by the fishing industry often obstructs proper analysis of fishery data. Participants recommended setting-up a process in order to examine different management regimes and the level of data confidentiality required by each. Mechanisms to use fishery data for analytical purposes without breaching agreed confidentiality standards (e.g. scientific reviewing processes) and procedures to reduce the level of data confidentiality required by the fishing industry (e.g. through feed-back to operators) should be revised.

RECOMMENDATIONS OF THE WORKSHOP

36. The workshop fully endorsed the conclusion of the Deep Sea 2003 Conference (page 6, section 3) that: "*the obligation to provide data for management purposes must be accepted as non-negotiable on the part of governments of the flag States and the industry itself and that it should be fully implemented as a matter of priority. Governments must provide moral and legal support to ensure that the data needed for management are provided and undertake the necessary coordination to ensure this happens.*"

37. In reviewing Section 6.A "Data, Reporting and Assessment" of the Draft International Guidelines on the Management of Deep-sea Fisheries in the High Seas, the workshop identified the following recommendations as particularly important to the management of bottom fisheries in the high seas.

Data collection

38. A wide range of data were required to successfully manage bottom fisheries in the high seas. These included:

a) Fishing activity:

i. Catch and Effort Logbook – These data should be collected according to the operational characteristics of each fishing method (e.g. each individual tow for trawl, each set for longline) and in sufficient detail to facilitate effective stock assessment and assess impacts on VMEs. Such data should include catch by species (both target and non-target, retained and discarded), gear and vessel type, effort statistics appropriate to each fishing method, fishing location, depth of fishing, date and time fished. Because deep-sea marine living resources and VMEs may have localized distributions (in some cases, on a single seamount or ridge feature) fine spatial scale reporting is required.

ii. Vessel monitoring systems.

b) Scientific surveys (e.g trawl and acoustic surveys) – consideration should be given to having commercial fishing vessels conduct these surveys given the limited resources likely to be available in offshore fisheries, and the urgent need for immediate management.

c) Benthic habitat surveys – Data should be collected on all aspects of the biology and ecology of VMEs and deep-sea marine species, habitats, and ecosystems; on the capacity of deep-sea marine living resources, habitats and communities to recover from perturbations; on the ecosystem effects of fisheries and the effectiveness of conservation and management measures.

d) Surveys should identify areas where VMEs occur or are likely to occur using a systematic approach including sampling, parametric and multibeam echo sounders, and be complemented using information on existing fisheries in the area and other relevant historic sources of information.[1]

e) Biological characteristics of catch (for example: length, weight and sex of fish; hard structures) should be collected by commercial fishers, scientific observers, port or market sampling.

f) Registers of vessels authorised to fish should contain detailed information on each vessel including length, tonnage, type of gear, and the areas, fisheries and species for which the vessels are authorized to fish, and whether the vessels are active in bottom fisheries in the high seas. Flag states should continuously update this information and submit this on an annual basis to relevant RFMOs and FAO.

g) States should ensure that all vessels operating in bottom fisheries in the high seas have a permanent ID (e.g. International Maritime Organization (IMO) number) to assist in collecting high quality data and information on the activities of the vessel.

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[1] P. Durán Muñoz, M. Sayago-Gil, T. Patrocinio, A. Serrano, F.J. Murillo, S. Parra, L.M. Fernández Salas, M. Sacau, V. Díaz del Río and X. Paz. 2007. ECOVUL/ARPA Interdisciplinary Project: Looking for a model to study the interaction between deep-water bottom fisheries and their supporting high-seas ecosystems. ICES CM 2007/R:01.

h) Socio-economic data should be collected for bottom fisheries in the high seas. The workshop participants did not have the expertise to define what data should be collected. Guidelines for the collection of socio-economic data for bottom fisheries in the high seas should be developed.

39. The workshop recommended that States examine existing successful examples. Some existing examples of operational high seas data collection programmes and standards are listed below:

a) The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) Scientific Observer Manual; [2]

b) CCAMLR Conservation Measure 41-01; [3]

c) CCAMLR Catch and Effort Data forms;[4]

d) FAO Fisheries Circular 1020, Management of Demersal Fisheries Resources of the Southern Indian Ocean;[5]

e) European Commission Council Regulation 2347/2002 (establishing specific access requirements and associated conditions applicable to fishing for deep-seas stocks);[6]

f) Format for electronic exchange of fisheries monitoring information (the North Atlantic Format).[7]

40. States and RFMOs should develop, adopt and publish standardised and consistent data collection procedures and protocols. Consideration should be given to adopting standardised logbooks and survey methodologies.

41. It is highly desirable that electronic data recording and reporting systems be used to facilitate cost effective and timely data exchange and analysis, etc.

42. Observer coverage on vessels engaged in new and exploratory fisheries should be 100 percent.

43. National and international training programmes for fishers and scientific observers should be used to improve catch identification and biological data collection, including existing FAO material for the identification of commercial species and development of field manuals for the identification of non-commercial species, particularly for benthic invertebrates. This work may need to be implemented and coordinated by FAO in some regions, especially where capacity building in developing countries is required.

44. It was stressed that it was important to obtain as much historical data as possible, from both fisheries and non-fisheries sources (e.g. scientific research surveys), to provide information to determine the current status of demersal and bentho-pelagic fish stocks on the high seas and

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[2] http://www.ccamlr.org/pu/e/e_pubs/om/toc.htm
[3] http://www.ccamlr.org/pu/e/e_pubs/cm/06-07/41-01.pdf
[4] http://www.ccamlr.org/pu/e/sc/fish/forms.htm
[5] http://www.fao.org/fi/website/MultiQueryAction.do?filterBy=publication_set.dcterms%3AhasVersion.C1020
[6] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002R2347:EN:NOT
[7] http://www.naf-format.org/index.htm

assess the cumulative impact and/or "footprint" on VMEs. FAO should task experts to identify sources of such historic commercial information for bottom fisheries in the high seas, in particular from past distant water fishing fleets (for example, the Summary and Review of Soviet and Ukrainian Scientific and Commercial Fishing Operations on Deepwater Ridges of the Southern Indian Ocean, FAO Fisheries Circular No. 991) and investigate funding sources that may be available to retrieve this information.

45. FAO should approach research agencies, universities, and industry organisations to gain access to historical survey information and observer databases and scientific reports related to bottom fisheries in the high seas.

46. Relevant data and information on VMEs and the impact of fishing, in addition to the data obtained during the course of fishing operations, should be collected and collated by States and RFMOs. This would include data on the presence of VMEs generated by both fisheries and fishery-independent related research surveys (e.g. Southern Indian Ocean Deepwater Fishers' Association [SIODFA], MAR-ECO[8]); biogeographic information and predictive modeling regarding the likely presence of VMEs (e.g. the 2006 report by UNEP/Census of Marine Life); and bathymetrical information (e.g. The General Bathymetric Chart of the Oceans [GEBCO]). FAO should facilitate the compilation and collation of this information on a global scale, particularly in relation to areas of the high seas where no RFMO/A currently exists. States, RFMOs and FAO should also collect information on other potential impacts to VMEs in relevant areas (e.g. direct harvesting of corals, seabed mining).

47. States and RFMOs should undertake to determine impacts of various types of fishing gear on VMEs to complement the information generated by commercial fishing vessels. This is important, particularly in cases where the ability to infer impacts on VMEs in commercial operations may be difficult because of the limited extent to which species indicative of the presence of VMEs are observed as bycatch (e.g. corals in longline fisheries).

Data verification and validation

48. The importance of complete and accurate data was noted. All reasonable measures should be taken by industry, States and RFMOs to ensure that high quality data are available to manage bottom fisheries in the high seas.

49. Data should be verified by comparing information from different sources such as:

a) vessel monitoring systems;

b) scientific observer programmes (to monitor catch, effort, catch composition, impacts on VMEs and other details of fishing operations);

c) vessel trip, landing and transshipment reports;

d) catch/trade documentation schemes, and import/export statistics;

e) port sampling.

[8] MAR-ECO is an international exploratory study of the animals inhabiting the northern mid-Atlantic. Scientists from 16 nations around the northern Atlantic Ocean are participating in research of the waters around the mid-Atlantic Ridge from Iceland to the Azores

50. Data should be validated through mechanisms such as:

a) Comparisons between data types that should be equivalent;

b) Checks for impossible or highly improbable data values;

c) Catch profiling.

Data reporting

51. All data collected should be reported and reviewed.

52. Data should be collected and reported at the finest possible spatial and temporal resolution possible and be made available for the purpose of agreed scientific analyses.

53. Where RFMOs exist, countries should submit the data they collect on bottom fisheries in the high seas at the finest resolution to the RFMO which in turn should submit a subset or aggregated data to FAO. If necessary, RFMOs and FAO, and not States, should implement confidentiality rules similar to those used by CCAMLR (Appendix C).

54. Where RFMOs do not exist, countries should submit their fine-scale resolution data directly to FAO (see Figure 1).

55. Where domestic legislation or regulation inhibits the provision of complete and fine-scale data to RFMOs or FAO, States should amend their legislation and regulations as they relate to fisheries to remove this barrier. National legislation or regulations should not be used as an excuse to withhold fine scale data from RFMOs or from FAO.

56. Data reporting and analysis should be as transparent as possible to allow all interested parties to review the effectiveness of the management of bottom fisheries in the high seas and the conservation of VMEs.

57. FAO should review the influence of different management regimes on the collection of high quality data. The lack of appropriate incentives in bottom fisheries in the high seas, including secure and exclusive fishing entitlements, exacerbates the problems of deficient and unavailable data.

58. Information on status and trends of bottom fisheries in the high seas should be disseminated through the Fishery Resource Monitoring System (FIRMS) partnership.

Identifying the footprint of existing fisheries

59. Identifying the footprint of existing bottom fisheries will require collection of data on:

a) A clear reference period;

b) What is "significant" involvement;

c) Whether involvement and footprint should be measured in catch or effort units, by types of boat and gear; and

d) The relevant spatial resolution.

General recommendations

60. The *World Wide Review of Bottom Fisheries in the High Seas* should be updated periodically. This should include a review of the data and knowledge available as well as management approaches.

61. A worldwide review of national authorizing protocols (registry, licensing, activity) for bottom fisheries in the high seas should be undertaken.

62. The International Guidelines on the Management of Deep-Sea Fisheries in the High Seas should set best standards for data collection, reporting, and analysis.

63. The term "deep-sea" in the draft international guidelines should be replaced with "bottom" because of the difficulties in agreeing on a depth threshold for deep-sea regions.

64. Independent reviews of the data, impact assessments and the effectiveness of conservation and management measures for bottom fisheries in the high seas should be conducted periodically.

65. FAO should undertake a review of existing best practice for the collection, reporting, and analysis of data for the management of bottom fisheries in the high seas.

66. FAO should also undertake a review of the best methodologies for identifying and mapping VMEs and prepare field manuals for use by fishers and fishery researchers.

67. FAO should periodically review best practices for quantifying the impact of bottom fisheries on VMEs.

68. FAO should collaborate with international partners to develop a database of VMEs on the high seas.

ADOPTION OF THE REPORT

69. The recommendations of the workshop were adopted on 7 November 2007.

APPENDIX A

Agenda

1. Opening of the workshop
2. Election of chairperson
3. Adoption of the agenda and arrangements for the session

World Wide Review (WWR) of Deep-Sea Fisheries in the High Seas

4. Presentation of the objectives, target audience, methodology (including questionnaire and reporting structure) and a summary at the global level of the WWR of Deep-Sea Fisheries in the High Seas.
5. General discussion on the WWR, including comments and recommendations on the structure and approach of the review
6. Brief presentation and discussion of 5-6 regional fact sheets
7. FIGIS and FIRMS as enabling mechanisms for reporting on and disseminating fisheries related information
8. Discussion on overall need for reviews at global, regional, or national levels
    a. WWR of Deep-Sea Fisheries in the High Seas reviewing process (Who: national/regional experts and reviewers, timeframe)
    b. Tools/media for dissemination (GIS, FIGIS, etc.)
    c. Periodic update of the WWR
    d. Additional reviews/databases needed for the management of deep-sea fisheries (fleet register, historical data/information, Vulnerable Marine Ecosystems database)

International Guidelines for the Management of Deep-sea Fisheries in the High Seas

9. Presentation of the guidelines, with a focus on information and data aspects, and proposals for the list of topics to be discussed by the workshop
10. Plenary discussion by topic.
11. Working groups to draft recommendations for the WWR of Deep-Sea Fisheries in the High Seas and for the Guidelines

APPENDIX B

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APPENDIX C

Rules for access and use of CCAMLR data

(*Commission for the Conservation of Antarctic Living Marine Resources, Basic Documents, Rules for Access and Use of CCAMLR Data, December 2006*)

The following Rules for Access and Use of CCAMLR Data were adopted by the twenty-second Meeting of the Commission (CCAMLR-XXII, paragraphs 12.1 to 12.6):[9]

It is recognized that:

1. All data submitted to the CCAMLR Secretariat, and maintained by the CCAMLR Data Centre, shall be freely available to Members for analysis and preparation of documents for the Commission, Scientific Committee and their subsidiary bodies.

2. Such data may be analysed in respect of:

   (a) work specifically outlined and endorsed by the Commission or Scientific Committee;
   (b) work not specifically endorsed by the Commission or the Scientific Committee.

3. Inclusion of data, analyses or results from data held in the CCAMLR Data Centre into Working Papers, Background Papers, and any other documents tabled at meetings of the Commission, Scientific Committee or one of their subsidiary bodies does not constitute publication and therefore is not a release into the public domain.

4. Inclusion of data held in the CCAMLR Data Centre into the published reports of the Commission, Scientific Committee, Working Groups, *CCAMLR Science*, the *Statistical Bulletin* or any other CCAMLR publication constitutes release into the public domain.

5. Inclusion of data held in the CCAMLR Data Centre in any publication outside CCAMLR constitutes release into the public domain.

6. Subject to paragraphs (1) to (3), originators/owners of data have the right to:

   (a) be consulted (including assignation of authorship) on the preparation, if necessary including publication, of documents describing analyses and interpretation of their data;
   (b) approve the level of detail revealed in documents using their data;
   (c) stipulate terms and/or levels of data security if necessary.

[9]These rules replace those adopted at the Eleventh Meeting of the Commission (CCAMLR-XI, paragraph 4.35). The current "Rules for Access to CDS Data" (CCAMLR-XIX, paragraph 5.23) should remain in place alongside the new standard rules until such times as all aspects of CDS data handling are duly taken into account in the new standard rules (CCAMLR-XXII, paragraph 7.22).

Accordingly,

7. Requests to the Secretariat for access and/or use of data maintained by the CCAMLR Data Centre by individual Member scientists/officials shall be approved in writing as appropriate by that Member's Commission Representative, Scientific Committee Representative, or CDS Officer in consultation with the Commission Representative. Members are responsible for informing individual scientists or individuals requesting data of the rules governing access and use of CCAMLR data and for obtaining agreement to comply with such rules.

8. Requests in support of analyses endorsed under (2)(a) above should include the type of data requested, the degree of data aggregation required, the spatial and temporal detail required, and the anticipated format to be used in presenting results of the analyses. For such requests, the Secretariat shall ensure that each request meets the conditions of the approval granted for the original endorsement, and, if so, release the data and inform the data owner(s)/originator(s) accordingly. Release of data by the Secretariat to the requestor does not constitute permission to publish or release data into the public domain. Such permission remains a matter to be determined between the requestor and the data originator(s).

9. Requests in support of non-endorsed analyses under (2)(b) above should include the information listed in (8) as well as details of the analytical procedures to be used and the opportunity for data owner(s)/originator(s) to be involved. For such requests, the Secretariat shall be satisfied that each request contains the required information before forwarding it to the data originator(s) for approval within a specified time period. Once approval has been received the Secretariat shall release the data. Release of data does not constitute permission to publish or for release into the public domain. Such permission remains a matter to be determined between the requestor and the data owner(s)/originator(s).

10. If approval for data release under (9) is not forthcoming within the specified period, the Secretariat shall initiate and facilitate consultation between the data requestor and data owner(s)/originator(s). The Secretariat shall not release data without the written approval of the data owner(s)/originator(s). Failure to achieve agreement shall be brought to the attention of the Scientific Committee and Commission.

11. The following statement shall be placed on the cover page of all Working Papers, Background Papers and any other papers tabled at meetings of the Commission, Scientific Committee or their subsidiary bodies:

> "This paper is presented for consideration by CCAMLR and may contain unpublished data, analyses, and/or conclusions subject to change. Data in this paper shall not be cited or used for purposes other than the work of the CCAMLR Commission, Scientific Committee or their subsidiary bodies without the permission of the originators and/or owners of the data."

This document contains the report of the Workshop on Data and Knowledge in Deep-sea Fisheries in the High Seas held in Rome from 5 to 7 November 2007. The Workshop was convened to review an initial draft of the International Guidelines as called for by the FAO Committee on Fisheries at its twenty-seventh session in 2007. This expert consultation was preceded by the Expert Consultation on Deep-sea Fisheries in the High Seas, held in Bangkok, in November 2006. The consultation adopted a draft of the international guidelines to be forwarded on to a technical consultation for review and adoption.

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